

AppIn No. 10/789,430
Reply to Office Action of March 21, 2005

REMARKS/ARGUMENTS

The Office Action dated March 21, 2005, has been reviewed and the comments carefully considered.

Claim 1 is pending in the application. Claim 1 is rejected under 35 USC §112 and 35 USC §103, as discussed below.

Claim Rejection Under 35 USC §112

In the Office Action, various issues and questions are raised concerning the description of the variety. By the amendments in the accompanying Substitute Specification, Applicant has made a bona fide effort to address all issues and questions.

Claim Rejection Under 35 USC §103

In order to establish a prima facie case of obviousness, three requirements must be satisfied. First, there must be some suggestion or motivation in the prior art relied upon to modify the reference. See *In re Fine*, 837 F2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). Second, there must have been a reasonable expectation of success for the proposed modification, at the time the invention was made. See *Amgen, Inc. v. Chugai Pharm. Co.*, 927 F2d 1200, 1209, 18 USPQ2d 1016, 1023 (Fed. Cir. 1991). Third, *the prior art reference must teach or suggest all the limitations of the claims*. See *In re Wilson*, 424 F2d 1382, 1385, 165 USPQ 494, 496 (C.C.P.A. 1970).

Applicant respectfully submits that the Office Action fails to make a prima facie case of obviousness, as the prior art references do not teach or suggest the distinctive characteristics of the claimed plant variety.

The Action points to no teaching or suggestion in either of the references cited that *heavy ion beam irradiation* may be used for the creation of the present variety. Likewise, the Action points to no teaching or suggestion that *any* form of radiation may be used to produce a plant having the particular distinctive combination of

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characteristics of the present variety, or that any variety so produced would retain its distinctive characteristics and reproduce true to type over succeeding generations.

Even assuming *arguendo* that one skilled in the art would be motivated to irradiate 'Sunmarisa' to obtain a mutated plant, there is no teaching or suggestion cited in the Action that such irradiation can be used to induce the specific characteristics that make the present variety distinctive. The Office Action cites Fehr, page 287, for the proposition that "radiation of plants has lead to numerous plant improvements" and, indeed, Fehr lists a number of such improvements. But nothing in any of the cited references teaches or suggests how to control which of the "numerous plant improvements" will be induced by irradiation, such that it would be obvious to one of skill in the art that irradiating 'Sunmarisa' would give rise to the distinctive features of the present variety. Taken to its logical conclusion, the Office Action appears to be taking the position that no plant variety, regardless of its distinctiveness, will be patentable if produced by irradiation, a conclusion for which no legal support is offered. Applicant respectfully submits that this is not the law and that the references cited do not teach or suggest the particular distinctive characteristics of the present variety, alone or in combination. Accordingly, Applicant respectfully requests that the rejection under section 103 be withdrawn.

In view of the foregoing amendment and response, it is believed that the application is in condition for allowance and, accordingly, reconsideration and allowance is earnestly solicited.

If any questions remain regarding the allowability of the application, Applicant would appreciate if the Examiner would advise the undersigned by telephone.

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The Commissioner is hereby authorized to charge any fees under 37 CFR 1.16 and 1.17 which may be required by this paper to Deposit Account No. 03-1728. Please show our docket number with any charge or credit to our Deposit Account.

Respectfully submitted,

CHRISTIE, PARKER & HALE, LLP

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**SUBSTITUTE SPECIFICATION
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VERBENA PLANT NAMED 'SUNMARISAKURA'**BOTANICAL/COMMERCIAL CLASSIFICATION***Verbena hybrida* ~~Verbena Plant~~**VARIETAL DENOMINATION**5 ~~ex-~~'Sunmarisakura'**BACKGROUND OF THE VARIETY**~~1) Parent;~~~~'Sunmarisa' (United States Patent No. Plant 11130)~~~~2) Progress~~

10 The present ~~a~~-new distinct cultivar of *Verbena* was created by heavy ion beam irradiation ~~on~~of the *Verbena* hybrid variety called 'Sunmarisa'. 'Sunmarisa' (U.S. Plant Patent[[.]] No. ~~Plant~~ 11130) is our *Verbena* hybrid variety ~~and~~ grown at ~~Omi R&D Center, Suntory Flowers Ltd~~ at Yokaichi-shi, Shiga-ken, Japan.

15 In July 1998, 5Gy of ionic nitrogen (135MeV) was irradiated onto 128 pieces of in vitro axillary bud of 'Sunmarisa' using the Ring Cyclotron at The Institute of Physical and Chemical Research. Two weeks later, elongated buds were grown from cuttings. In March 1999, ~~[[5]]~~five varieties were selected in view of self-sterility. These plants were propagated by cutting and then grown in pot and planter box on trial ~~from May 1999 at the Omi R&D Center of Suntory Flowers Ltd~~ Yokaichi-shi,

20 Shiga-ken, Japan. Additionally, the plants were grown in pots and planter boxes enduring trial in 2000. Finally, one plant was selected from these ~~[[5]]~~five varieties in view of ~~the~~having a long flower duration. By November 2000, the botanical characteristics of the ~~finally~~-selected plant were examined. As a result, it was concluded that this new *Verbena* plant is distinguishable from any other variety,

25 whose existence is known to us, and is uniform and stable in its characteristics. This new variety of *Verbena* plant was named 'Sunmarisakura'.

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The new variety of the present invention can be distinguished from its parent 'Sunmarisa' in its self-sterility. Also the new variety can be distinguished from the similar variety 'Sunmaripi' in the flower color and self-sterility.

5 The new variety of Verbena plant 'Sunmarisakura' was asexually reproduced by cutting at Yokaichi-shi, Shiga-ken, Japan, and the homogeneity and stability thereof were confirmed. The instant plant retains its distinctive characteristics and reproduces true to type in successive generations.

10 In the following description, the color-coding is in accordance with The Horticultural Colour Chart of The Royal Horticultural Society, London, England (R.H.S. Colour Chart).

'Sunmarisa' was used ~~as the parent when obtaining this~~ to produce the new variety, 'Sunmarisakura'. The botanical characteristics of 'Sunmarisa' are as follows when grown at ~~the Omi R&D Center of Suntory Flowers Ltd.~~ Yokaichi-shi, Shiga-ken, Japan.

15 **Plant:**

Growth habit.—Decumbent.

Plant width.—Approximately 65-71 cm.

Plant height.—Approximately 8-9 cm.

Stem:

20 Diameter.—Approximately 1.7-2.2 mm.

Anthocyanin pigmentation.—Absent.

Pubescence.—Normal.

Branching.—A moderate level of branching is present.

25 Subterranean stem.—Absent but when the stems contact the surface of soil, the nodes take root in the ground and the plant growth thereby spreads.

Length of internodes—Approximately 1.7-2.7 cm.

Leaf:

Phyllotaxis.—Opposite.

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Shape.—Oblong-lanceolate.

Depth of incision.—Shallow.

Margin.—Serrate.

Length.—Approximately 2.9-3.6 cm.

5 Width.—Approximately 1.6-2.4 cm.

Leaf apex.—Mucronate.

Leaf base.—Petiolate.

Color.—Dark olive green (near R.H.S. 141A) on the upper surface.

Pubescence.—Sparse.

10 Petiole.—Present.

Thickness of petiole.—Approximately 1.0-1.2 mm.

Length of petiole.—Approximately 1.2-2.5 mm.

Flower:

Shape of cluster.—Obovate.

15 Length of cluster.—Approximately 2.3-4.4 cm.

Diameter of cluster.—Approximately 4.0-5.8 cm.

Facing direction.—Upward.

Outward curvature of petal.—Flat.

Diameter.—Approximately 1.8-1.9 cm.

20 Height.—Approximately 2.1-2.2 cm.

Color.—Light purplish pink (near R.H.S. 62C) on the upper surface.

Eye color.—Pale yellow (near R.H.S. 11D).

Variegation on petal.—Absent.

Color presentation.—Substantially even.

25 Color intensity.—Absent.

Overlapping of petals.—Separate.

Incision of petal.—Present.

Number of petals.—5.

Sepal.—Tubular in configuration.

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Length of calyx.—Approximately 1.2-1.4 cm.

Anthocyanin pigmentation of calyx limb.—Absent.

Shape of pistil.—Two lobes.

Color of anther.—Yellowish green.

5 Diameter of peduncle.—Medium.

Length of peduncle.—Medium.

Number of flowers.—Many.

Flower bearing.—In a cluster.

Reproductive organs.—1 pistil and 4 stamens.

10 Pollen.—Brilliant greenish-yellow (near R.H.S. 6C) in coloration.

Flower fragrance.—Absent.

Flowering time.—Early.

Flowering duration.—Long. When planted during March, the plant commonly ~~blossoms~~blooms from April to November. A bloom cluster commonly is present for approximately 2 to 3 weeks, and an individual bloom within the cluster commonly lasts for approximately 7 to 10 days on the plant. The plant is highly tolerant to heat, and exhibits a high resistance to diseases, particularly powdery mildew, and a high resistance to pests.

15

'Sunmaripi' was used as a comparison for this new variety 'Sunmarisakura'.

20 The botanical characteristics of the 'Sunmaripi' are as follows when grown at when grown at ~~the Omi R&D Center of Suntory Flowers Ltd~~ Yokaichi-shi, Shiga-ken, Japan.

Plant:

Growth habit.—Decumbent.

25 Plant width.—Approximately 60 cm.

Plant height.—Approximately 20 cm.

Stem:

Diameter.—Approximately 2.5 mm.

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Anthocyanin pigmentation.—Present.

Pubescence.—Normal.

Branching.—A moderate level of branching is present.

5 Subterranean stem.—Absent but when the stems contact the surface of soil,
the nodes take root in the ground and the plant growth thereby spreads.

Length of internode.—Approximately 4.5 cm.

Leaf:

Phyllotaxis.—Opposite.

Shape.—Oblong-lanceolate.

10 Depth of incision.—Shallow.

Margin.—Serrate.

Length.—Approximately 3.5 cm.

Width.—Approximately 2.2 cm.

Leaf apex.—Mucronate.

15 Leaf base.—Petiolate.

Color.—Grayish olive green (near R.H.S. 147A) on the upper surface.

Pubescence.—Sparse.

Petiole.—Present.

Thickness of petiole.—Approximately 1.0 mm.

20 Length of petiole.—Approximately 2.0 mm.

Flower:

Shape of cluster.—Obovate.

Length of cluster.—Approximately 3.2 cm.

Diameter of cluster.—Approximately 5.2 cm.

25 Facing direction.—Upward.

Outward curvature of petal.—Flat.

Diameter.—Approximately 1.7 cm.

Height.—Approximately 2.0 cm.

Color.—Deep purplish pink (near R.H.S. 77B) on the upper surface.

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Eye color.--Pale yellow (near R.H.S. 11D).

Variegation on petal.--Absent.

Color presentation.--Substantially even.

Color intensity.--Absent.

5 ~~Overlapping of petals.--Separate.~~

Incision of petal.--Present.

Number of petals.--5.

Sepal.--Tubular in configuration.

Length of calyx.--Approximately 1.0 cm.

10 Anthocyanin pigmentation of calyx limb.--Present.

Shape of pistil.--Two lobes.

Color of anther.--Yellowish green.

Diameter of peduncle.--Medium.

Length of peduncle.--Medium.

15 Number of flowers.--Many.

Flower bearing.--In a cluster.

Reproductive organs.--1 pistil and 4 stamens.

Pollen.--Brilliant greenish-yellow (near R.H.S. 6C) in coloration.

Flower fragrance.--Absent.

20 Flowering time.--Early.

Flowering duration.--Long. When planted during March, the plant commonly ~~blossoms~~blooms from April to November. A bloom cluster commonly is present for approximately 2 to 3 weeks, and an individual bloom within the cluster commonly lasts for approximately 7 to 10 days on the plant. The plant is highly tolerant to heat, and exhibits a high resistance to diseases, particularly powdery mildew, and a high resistance to pests.

25

SUMMARY OF THE NEW VARIETY

~~This~~The new variety of *Verbena* plant has a broad spreading growth habit and long stems. The plant is well branched and abundantly forms flowers in a

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cluster. The blooms are present in profusion. The blooming period is April to November and flowering duration is long. The entire plant remains in bloom for an extended period of time. The flower size is large and the petal coloration of the flowers is light purplish pink. The plant is highly tolerant to heat, exhibits a high resistance to pests and diseases, particularly powdery mildew. The plant has very low self-fertility

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 depicts a side view of the 'Sunmarisakura' plant of the present invention.

FIG. 2 depicts a close-up view of the flowers of the 'Sunmarisakura' plant of the present invention.

DESCRIPTION OF THE VARIETY

The botanical characteristics of the new and distinct variety of *Verbena* plant, 'Sunmarisakura' are as follows when grown at Yokaichi-shi, Shiga-ken, Japan.

Plant:

Growth habit.—Decumbent.

Plant width.—Approximately 65-71 cm.

Plant height.—Approximately 8-9 cm.

Stem:

Diameter.—Approximately 1.7-2.2 mm.

Anthocyanin pigmentation.—Absent.

Pubescence.—Normal.

Branching.—A moderate level of branching is present.

Subterranean stem.—Absent but when the stems contact the surface of soil, the nodes take root in the ground and the plant growth thereby spreads.

Length of internode.—Approximately 1.7-2.7 cm.

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Phyllotaxis.—Opposite.

Shape.—Oblong-lanceolate.

Depth of incision.—Shallow.

5 Margin.—Serrate.

Length.—Approximately 2.9-3.6 cm.

Width.—Approximately 1.6-2.4 cm.

Leaf apex.—Mucronate.

Leaf base.—Petiolate.

10 Color.—Dark olive green (near R.H.S. 141A) on the upper surface. Near R.H.S. 138A on the lower surface.

Pubescence.—Sparse.

Petiole.—Present.

Thickness of petiole.—Approximately 1.0-1.2 mm.

15 Length of petiole.—Approximately 1.2-2.5 mm.

Flower:

Shape of cluster.—Obovate.

Length of cluster.—Approximately 2.3-4.4 cm.

Diameter of cluster.—Approximately 4.0-5.8 cm.

20 Facing direction.—Upward.

Outward curvature of petal.—Flat.

Diameter.—Approximately 1.8-1.9 cm.

Height.—Approximately 2.1-2.2 cm.

25 Color.—Light purplish pink (near R.H.S. 62C) on the upper surface. Near R.H.S. 65A on the lower surface.Eye color.—Pale yellow (near R.H.S. 11D).

Eye size.—Small.

Variegation on petal.—Absent.

Color presentation.—Substantially even.

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Color intensity.—Absent.

~~Overlapping of petals.—Separate.~~

Incision of petal.—Present.

Number of petals.—5.

5 Sepal.—Tubular in configuration.

Length of calyx.—Approximately 1.2-1.4 cm.

Anthocyanin pigmentation of calyx limb.—Absent.

Shape of pistil.—Two lobes.

Color of anther.—Yellowish green (near R.H.S. N144D).10 ~~Peduncle length.—Approximately 2.1 cm.~~~~Peduncle diameter.—Approximately 1.5 mm.~~~~Diameter of peduncle.—Medium~~~~Length of peduncle.—Medium.~~~~Number of flowers.—Many.~~

15 Flower bearing.—In a cluster.

Reproductive organs.—1 pistil and 4 stamens.

Pollen.—Scarce. Brilliant greenish-yellow (Near R.H.S. 8C) in coloration.Stigma color. -- Near R.H.S. 144A~~Style color. — Near R.H.S. 144C~~20 ~~Ovary color. — Near R.H.S. 144B~~

Flower fragrance.—Absent.

Flowering time.—Early.

Flowering duration.—Long. When planted during March, the plant commonly ~~blossoms~~blooms from April to November. A bloom cluster commonly is present for approximately 2 to 3 weeks, and an individual bloom within the cluster commonly lasts for approximately 7 to 10 days on the plant. The plant is highly tolerant to heat. The plant grows well at temperatures up to at least 35°C, and exhibits a high resistance to diseases, particularly powdery mildew, ~~and a high resistance to pests.~~

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No serious damage by pathogens and pests common to Verbena has been observed.

5 This new variety of *Verbena* plant is most suitable for flower bedding and potting, particularly in planters, and is further excellent for use as a hanging basket.

The plant of this new variety, 'Sunmarisakura', is presently planted and maintained at ~~the Omi R&D Center of Suntory Flowers Ltd., 863-1 Aza-Iketani, Omi-cho, Yokaichi-shi, Shiga-ken, Japan.~~

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It is claimed:

1. A new and distinct variety of *Verbena* hybrida plant named
'Suhmarisakura', substantially as herein illustrated and described, having the
following combination of characteristics:

- 5 ~~_____ (a) _____ exhibits a decumbent growth habit with long stems;~~
~~_____ (b) _____ forms in abundance clusters of attractive light purplish pink~~
~~blooms that remain on the plant for an extended period of time, and~~
~~_____ (c) _____ exhibits good tolerance to heat, pests and diseases, and~~
~~_____ (d) _____ has very low self-fertility;~~

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VERBENA PLANT NAMED 'SUNMARISAKURA'

ABSTRACT OF THE DISCLOSURE

Disclosed herein is a *Verbena* plant having a decumbent growth habit and long stems. The plant forms flowers in clusters with a great profusion of blooms. The flowering duration is long and the entire plant remains in bloom for a considerable period of time. The flower size is large and the petal color of flowers is light purplish pink. The plant is highly tolerant to heat, pests and diseases, particularly powdery mildew, and is moderately resistant to cold. 'Sunmarisakura' does not freely set seed due to self-sterility.